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GENERAL NOTES.

BOTANY.

ON NOMENCLATURE.—"I think it is about time that the notion that a species must necessarily be named after some peculiarity that it possesses, should pass into the limbo of exploded ideas." This passage, in the article "Walks Round San Francisco," in the NATURALIST, December, 1878, page 791, induces me to

express my opinion on the use of personal names in scientific nomenclature.

Linnæus in his Philosophia Botanica proposes: "Nomina generica ad botanici *optime meriti* memoriam conservandam constructa sanite servanda sunt. Hoc unicum et summum premium laboris sanite servandum et *caste dispensandum*." I agree with this proposition. Generical names established for the memory of the *most deserving* botanists should be kept sacred and imparted *abstemiously*.

Like the preacher, who warned his congregation to act according to his saying not according to his doing, Linnæus did not always strictly follow his own maxim, but the rule he proposes is a good one. Though I would prefer even for genera characteristic names, I would not blame an author who likes to honor the *most deserving*[1] botanists by baptizing genera after their names.

In regard to specific names, Linnæus advises against the use of names of persons or countries. He says: "Inventoris vel alius cujusquinque nomen in differentia non adhibeatur. Locus natalis species distinctas non tradit. Differentia specifica continet differentiæ *notas essentiales*." Indeed a species that has not one character by which it can be distingushed from its congeners is not worth being called a species. In contradiction to this rule the Commission of European botanists, appointed by the International Congress at Paris, 1867, allowed the use of personal names. It is true what De Candolle says in the preface to those rules, that the Linnæan rules of nomenclature are obsolete, but just in this case I think Linnæus was right, and if that commission had considered how much personal names were misused and are misused in our time more than ever, then articles 32, 33 and 36 would not have passed in their present form. Of said misuse I could name many cases, but I take only one: Scheele published in *Linnæa* 114 new Texan plants, among which I count twenty-one *Rœmeriana*, fourteen *Lindheimeriana*, one *Grisebachii* and twenty *Texana*. When we deduct from the rest those which had already been described, more than half of all the new species got names which mean nothing more than a cheap compliment, worthless to a true scientist. The owners of the three above-mentioned personal names are botanists indeed (whether *most deserving* I am not competent to decide), but how often has a species to bear the name of a man who finds a new species as a blind hen finds a grain, or the name of the military commander of an expedition the collecting botanist was a member of, or the name of a friend of the species maker, whose connection with the object is looser yet. The most awkward thing is that, when a botanist mistakes a really new species for a known one, his mistake is rewarded by giving his name to the same new species which he did not recognize as such.

[1] Many are called, but few chosen.

There is another point in which I do not agree with the established rules: that is the right of priority, which the author of the "Walks" wishes to be extended even to wrongly spelled or ungrammatical names. This right of priority is the real source of premature publications and of the accumulation of synonyms. For example: Bertoloni, a respectable Italian botanist, professor in Bologna, receives a number of Alabama plants; he describes and names many new species which are known and named before. The trouble is, he is not enough acquainted with the North American flora and too hasty to leave the publication of new American species to an American author, who has at his disposition a greater quantity of specimens, which are necessary for a correct description. Now amongst those plants was perhaps a single poor specimen of *Petalostemon corymbosum*. Instead of laying it aside he describes it as the type of a new genus (*Gavesia*) in the order of Compositæ. How often in the same way we see a man who is not master of the synopsis, who does not know what is known, push his name before the scientific public, not from zeal for science, but from desire to see his "mihi" behind a new created species. Then true scientists have the trouble to clear the stable.

To meet the case at once there should be appointed an international committee, an Areopagus, in which the most prominent botanists should decide on the value of each specific name. Free competition would be left open, but the author of a name would have the risk of refusal. Better yet—we, the humble mortar carriers, should give over to the masters of systems all the pebbles and diamonds we find, and leave to them the task of assorting. The arena of science is wide, and there is chance enough to search for laurels outside of systematic botany.

And now one word about wrongly spelled or ungrammatical names. The Parisian congress has acknowledged the right to correct such bad names, and that is right. The best scholar may inadvertently make a mistake, and he will not be offended by being corrected. It is right to read *Astragalus aboriginum* instead of *aborigenorum*, and *Scytonema simplex* instead of *simplice.*—*Fred. Brendel.*

ASPIDIUM BOOTTII TUCKERMAN.—As the following note, prepared for my Catalogue of the "Davenport Herbarium" of North American Ferns, is supplementary to my paper on "*Aspidium spinulosum* SWZ., and its varieties," published in the NATURALIST for November, 1878, I offer it here in advance of publication.

In my paper on "*Aspidium spinulosnm* SWZ., and its varieties" (AMER. NAT., l. c.) I was led to consider *A. boottii* Tuckerman and *A. remotum* Braun as identical, by an examination of a specimen of the latter, at Cambridge, from Braun's herbarium, and to credit Braun's name with being the oldest, on the authority of remarks in Hooker's "British Ferns," t, 22, but since the pub-

lication of my paper I have endeavored to learn the exact date of the publication of Braun's name, with the following result:

The record, so far as it appears from all accessible authorities, is, that in 1834 Braun first discovered in a mountain valley near Baden specimens of a fern, growing with *Aspidium filix-mas* and *A. spinulosum* (*dilatatum*) that he at first referred to *Aspidium rigidum* as a variety of that species (var. *remotum*), but which he afterward designated as a species, under the name of *Aspidium remotum*. Later he appears to have regarded it as a hybrid form between *A. filix-mas* and *A. spinulosum*, but finally, according to Milde (Fil. Eur. et Atl., 1867), considered it a form of *Aspidium filix-mas*.

Braun, however, does not appear to have published any description, and unless, as Mr. Watson suggests, he may have given the name previously in some catalogue of the Lipsic Garden, the name *Aspidium remotum* does not appear until about 1850, when it occurs for the first time in "Verjüngung," Freiburg, 1849–50.

On the other hand, Tuckerman's name and description was published in *Hovey's Magazine* for 1843, which entitles it to the right of priority, and justifies my retaining it on stronger grounds than those given in my paper on *A. spinulosum*.

The question of identity, however, still remains in doubt. The two ferns have generally been regarded as identical, by English authors, but Milde held the opinion (Nova Acta, 1858) that *A. remotum* had nothing whatever in common with *A. boottii*, and as his opinion was based on a careful study of the anatomy of the two plants, it is entitled to the very highest consideration.

In the face of the opinion of so careful and thorough an investigator as Milde, it is extremely unsafe for any one to hazard an opposite opinion, without a most careful and searching investigation, conducted on the same principles as those made by that eminent cryptogamic botanist; but I cannot forbear expressing the opinion that some of the external characters pointed out by Milde as separating the two ferns, are not altogether reliable, as, for example, the comparative length of the stipe, the chaffiness, or stoutness of the rachis, and the degree of pinnation in the frond, all of which characters certainly vary greatly in different specimens of *A. boottii*.

The difference, however, pointed out in the number of fibre-bundles in the stipe of *A. remotum* (7) as compared with the similar structure of the stipes in *A. spinulosum* and its forms (5 fibre-bundles) is a most important one, and one not to be lightly overlooked.

According to Milde, also, the indusium in *A. remotum* is without glands, whereas in *A. boottii* the indusium is finely glandular. But as these glands frequently disappear early, and are not always present after the indusium contracts, we cannot tell how much importance to attach to Milde's statement, without knowing ex-

actly in what state his specimens were when examined. Milde, himself, in another part of the same work, when speaking of *A. spinulosum* and *dilatatum*, apparently regarded the presence or absence of glands on the indusium as unimportant.

I shall discuss this question more fully hereafter; for the present I can only say that the specimen of *A. remotum* at Cambridge, from Braun's herbarium—the ticket is apparently in Braun's handwriting and bears date "Aulich, Sep. 1859"—appears to me identical with our *A. boottii!* If detached from the sheet and sent out for that fern, it would be generally received without question.

But in whichever way the question of identity is finally decided, its determination either way cannot affect the position of Tuckerman's name, which dates with Braun's earliest name (*Aspidium rigidum*, var. *remotum*, A. Br. in Dœll's Rheinische Flora, 1843) and is the oldest specific name on record. The name *Aspidium boottii* Tuckerman, therefore, must remain undisturbed.

I am greatly indebted to Mr. Sereno Watson, of Cambridge, and to Prof. Eaton, for their kindness in aiding me to look up authorities. (Geo. E. Davenport in Catalogue of the "Davenport Herbarium" of North American Ferns, Mass. Hor. Soc. ined. MEDFORD, Mass., Jan., 1879.)

Remarks—In my paper on *Aspidium spinulosum* I was inadvertently led into two errors of authority that I wish to correct here. *Aspidium spinulosum* var. *dilatatum* and *A. spinulosum* var. *boottii* should both be followed by Gray as authority, in place of "D. C. Eaton in Gray's Manual."

BOTANICAL NEWS.—Sir J. Hooker, in his recent address to the Royal Society, refers to the remarkable theory of Schwendener, now ten years old, affirming that the lichens consist of ascomycetal fungi united in a commensal existence with algæ. Indeed Stahl has manufactured such lichens, as *Endocarpon* and *Thelidium* by juxtaposition of the appropriate algæ and fungi. That minute plants (Bacillus) may occasion disease is apparently shown by the fact that the dried blood of horses that had died of the "Loodiana fever," in India, on being sent to England, there afforded seed from which a crop of *Bacillus anthracis* has been grown, which justified its distant pathological origin by reproducing the disease in other animals.

That gigantic undertaking, the Flora of Brazil, begun by Von Martius, is now being carried on by Eichler of Berlin, under the liberal auspices of the Emperor of Brazil. A little over a year ago Bentham's Flora of Australia was completed. It describes eight thousand species of plants.

Mr. A. W. Bennett contributes to *Nature* an account of the experiments of Rev. G. Henslow on the absorption of water by the leaves of plants, forming a sequel to and confirming those of Boussingault. That plants absorb water by their leaves, and that

gardeners should therefore continue to water plants by sprinkling their leaves, seem well established facts.

The *Bulletin* of Hayden's U. S. Geological Survey, Vol. IV, No. 4, contains a catalogue, by Prof. J. W. Chickering, of Phænogamous and vascular Cryptogamous plants collected during the summers of 1873 and 1874, in Dakota and Montana, along the forty-ninth parallel, by Dr. Elliott Coues, U.S.A.; with which are incorporated those collected in the same region at the same time, by Mr. George M. Dawson.

Trimen's *Journal of Botany* contains articles on a monandrous Cypripedium, by S. L. M. Moore, and a further note on the structure of Composites, by M. T. Masters. Braun's article on the vegetable remains in the Egyptian museum at Berlin, is translated from the Zeitschrift für Ethnologic, the first part appearing in the January number.

The *Bulletin* of the Torrey Botanical Club contains an account among other notes, by Prof. Gray, of a sporting *Trillium grandiflorum*, and of an *Agaricus* with the odor of chlorine, by C. F. Austin.

In the *Botanical Gazette* G. Vasey describes a new *Panicum*, *P. littorale* from Mobile. J. M. Coulter contributes an article on the flora of Northern Indiana.

ZOÖLOGY.[1]

NOTE ON THE HAIRY-TAILED MOLE, SCALOPS BREWERI OF AUTHORS.—The earliest description of a mole, referable to the genus *Scapanus* and to the species subsequently named "*Scalops brewerii* by Bachman, is that given by Harlan, Fauna Americana, 1825, p. 43, under the name of *Talpa europea*—he wrongly supposing that it was the common mole of Europe. He does not state whether he described an American or a European specimen; and the general drift of his remarks indicates that he compiled, at least in part, from some staple description of *Talpa europea*. But it is evident that he really had in view an American mole, which he recognized as distinct, both generically and specifically, from our common *Scalops aquaticus*.

That this is no other than the *Scapanus* is shown by the dental formula of forty-four teeth, which is applicable neither to *Scalops* nor to *Talpa;* and the rest of his description is incompatible in no respect with *Scalops "breweri,"* which so closely resembles *Talpa europea* in superficial appearance that it has not seldom been mistaken for the latter. That there is no doubt in the case is further witnessed by Audubon and Bachman, who state (Quad. N. A. III, p. 219) that "Harlan had described the skull of the species we have since described and figured as *Scalops brewerii*, having forty-four teeth," &c.

In connection with this description, Harlan published William

[1]The departments of Ornithology and Mammalogy are conducted by Dr. ELLIOTT COUES, U. S. A.